Most of these boxes have gone to the smaller towns, where the work is done chiefly in one-room rural schools. A few have gone to city schools, and some other Connecticut cities are doing similar work in science. In Stamford it is done in the upper grades as departmental work by a teacher who is capable and willing. In Norwalk it is carried on by room teachers under close supervision of the high school science department. In New Haven and Danbury it is in charge of the normal schools.

In the one-room rural schools the work is usually done with all classes from about the fourth stage up, reciting together. In the city schools it is done chiefly in the seventh and eighth grades, though there is no reason why it cannot be profitably used in lower grades, as it sometimes is. Two twenty-minute periods a week are usually allowed, though in the two upper grades the periods are sometimes longer. The work indicated in the booklet could be extended over two years by some teachers, while others might go through it in one; in Danbury it covers three half-years, with kindred work from other subjects in alternate half-years.

But this is pioneer effort at a thing which holds far more worth than these attempts alone are going to bring out. It is a shame and a real loss to our civilization that as a people we know and care so little about the interesting and important knowledge that is so close at hand. These efforts may fail and the subject die out from our schools, but the time will come when thought-and-interest lessons based on natural science will have their established place in the common schools of America.

Project Teaching[1]

PROF. C. R. MANN, of the Carnegie Foundation.

There seems to be a general impression that project teaching and general science courses are suitable only for grammar schools and the early years of the high school. Even the high school teachers themselves speak of the need of a regular or formally organized science course for the third and fourth years. So far as I am aware, no one has yet proposed general science courses for the colleges and universities. Yet the work of all the research men in the country and the work of the advanced students in science is always carried on by the project method and is successful in proportion as the project is really the student's own.

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[1] Abstract of address delivered at a General Science Conference at Salem, Mass.

The same is true in the engineering colleges. Among the professional engineers there is a very marked demand for what they call "general engineering science". It is pointed out that a man who graduates from a civil engineering course frequently makes his success in life in mechanical engineering or vice versa. It is also pointed out that all engineering problems are essentially projects and that many of them involve a very wide knowledge of the different fields of science. To be a successful engineer thus involves having the ability to tackle and solve projects efficiently and this ability is acquired like every other ability by practice and training in doing. It therefore follows that the most efficient training of engineers is likely to be secured in those schools in which the project method of instruction is used most freely.

It is difficult for teachers to get started with the project method because it is so different from the one by which we were ourselves taught. Professor Dewey has given us a formula which is very valuable if it is used intelligently and not followed too blindly. This formula may be stated in this way: The old system of instruction had for its aim, first the development of technique on the ground that this technique might at some future time be of use to the student. The project method teaches technique only in response to the personal need felt by the student himself. The formulae thus will run:

Old Method: 1-Technique 2——?
New Method: 1-Need 2-Technique.

Projects

By J. C. Moore, High School, Bridgeport, Connecticut.

Much of the science teaching of the past reminds me of a remark made by a young Chinese student of my acquaintance. After seeing one of his first games of American baseball, in which his school team was badly beaten, due to a number of wild throws, he was called upon to give his version of the defeat. "Well," he said smiling, "our team have only one fault, they throw the ball where there isn't anybody." Much of our science teaching is thrown where there isn't anybody. In other words, it doesn't reach its